

(19) 世界知的所有権機関  
国際事務局



(43) 国際公開日  
2004 年10 月21 日 (21.10.2004)

PCT

(10) 国際公開番号  
WO 2004/090402 A1

(51) 国際特許分類<sup>7</sup>: F16K 31/122  
(21) 国際出願番号: PCT/JP2004/002975  
(22) 国際出願日: 2004 年3 月8 日 (08.03.2004)  
(25) 国際出願の言語: 日本語  
(26) 国際公開の言語: 日本語  
(30) 優先権データ:  
特願2003-100704 2003 年4 月3 日 (03.04.2003) JP  
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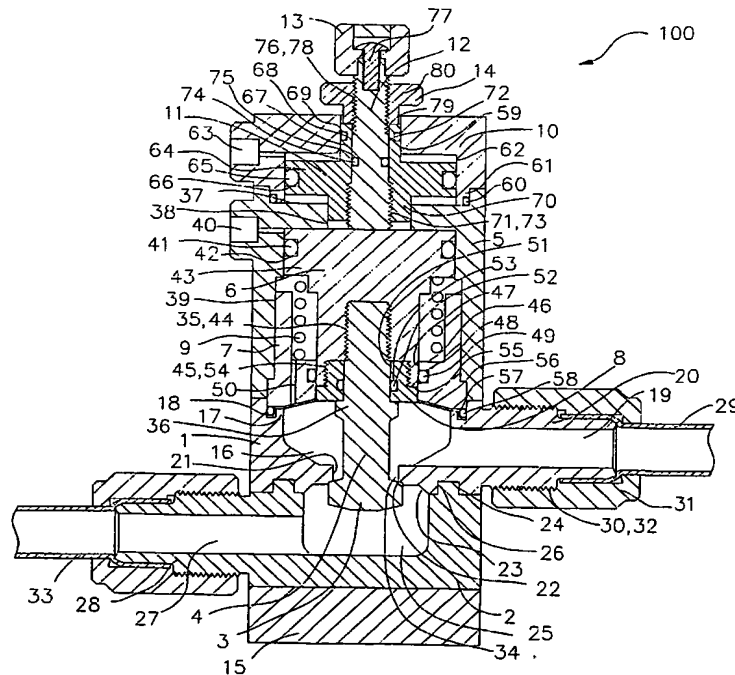
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(81) 指定国 (表示のない限り、全ての種類の国内保護が可能): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

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(54) Title: FLUID OPERATING VALVE

(54) 発明の名称: 流体作動弁



(57) Abstract: A fluid operating valve, comprising a first valve chamber (16) and a second valve chamber (25) communicating with each other through a through-port (21), a first cylinder chamber (39) formed adjacent to the first valve chamber (16) and slidably storing a first piston (6), a valve element (3) positioned in the second valve chamber (25) and abutting on or separating from a valve seat (22) around the through-hole (21), a valve stem (4) having one end connected to the first piston (6) and the other end connected to the valve element (3), and an

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(84) 指定国(表示のない限り、全ての種類の広域保護が可能): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), ユーラシア (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), ヨーロッパ (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

添付公開書類:

— 国際調査報告書

2文字コード及び他の略語については、定期発行される各PCTガゼットの巻頭に掲載されている「コードと略語のガイダンスノート」を参照。

annular diaphragm (8) having an inner peripheral part fixed to the valve stem (4) and an outer peripheral part fixed to the inner peripheral surface of the first valve chamber (16), wherein the first piston (6) is energized by a spring (9) to allow the valve element (3) to abut on the valve seat (22). The first piston (6) is moved by supplying working fluid into the first cylinder chamber (39) through the working fluid supply port of a first cylinder (5) to separate the valve element (3) from the valve seat (22).

(57) 要約: 流体作動弁は、貫通口(21)を介して連通している第1弁室(16)及び第2弁室(25)と、第1弁室(16)に隣接して設けられ且つ第1ピストン(6)を摺動可能に収容している第1シリンダ室(39)と、第2弁室(25)内に位置し且つ貫通口(21)周りの弁座(22)に当接又は離間する弁体(3)と、一端が第1ピストン(6)に接続され且つ他端が弁体(3)と接続された弁軸(4)と、内周部を弁軸(4)に固定され且つ外周部を第1弁室(16)の内周面に固定された環状のダイヤフラム(8)とを備える。第1ピストン(6)はバネ(9)によって付勢され、弁体(3)が弁座(22)に当接している。第1シリンダ(5)の作動流体供給口から第1シリンダ室(39)内に作動流体を供給することによって、第1ピストン(6)を移動させ、弁体(3)を弁座(22)から離間させることができる。

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/002975

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl<sup>7</sup> F16K31/122

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl F16K31/12-31/165, 31/36-42

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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Kokai Jitsuyo Shinan Koho	1971-2004	Jitsuyo Shinan Toroku Koho	1996-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 11-200959 A (Isuzu Motors Ltd.), 27 July, 1999 (27.07.99), Full text; Figs. 1, 7, 8 (Family: none)	1-7
Y	JP 7-217767 A (CKD Kabushiki Kaisha), 15 August, 1995 (15.08.95), Full text; Figs. 1 to 3 (Family: none)	1-7
Y	JP 8-170755 A (KOGANEI CORP.), 02 July, 1996 (02.07.96), Full text; Fig. 1 (Family: none)	1-7

☒ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

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"&" document member of the same patent family

Date of the actual completion of the international search  
01 June, 2004 (01.06.04)

Date of mailing of the international search report  
15 June, 2004 (15.06.04)

Name and mailing address of the ISA/  
Japanese Patent Office

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Facsimile No.

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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/002975

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 200382/1985 (Laid-open No. 108602/1987) (SMC Corp.), 11 July, 1987 (11.07.87), Full text; Fig. 1 (Family: none)	1-7